

Serial No. 09/980,193
Art Unit: 1651

In the Claims:

Please enter the following amended claims in the application. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-11 (Canceled)

12. (Currently amended) A reaction medium for fermentation processes comprising:

(a) a microorganism; and

(b) a phase inversion temperature emulsion, wherein the emulsion comprises water, an emulsifier and an oil phase selected from the group consisting of (i) fatty acid alkyl esters, vegetable triglycerides, and mixtures thereof comprising at least one of a carbon source or a ~~transformant~~ substrate, and wherein the emulsion has an average droplet size of from 50 to 400 nm.

13. (Previously presented) The reaction medium according to claim 12, wherein the emulsion has an average droplet size of from 100 to 300 nm.

14. (Previously presented) The reaction medium according to claim 12, wherein the emulsion has an average droplet size of from 180 to 300 nm.

15. (Previously presented) The reaction medium according to claim 12, wherein the emulsion has an average droplet size of from 160 to 250 nm.

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16. (Previously presented) The reaction medium according to claim 12, wherein the oil phase comprises a fatty acid methyl ester according to the general formula (I):



wherein R^1 represents a C6-22 alkyl group and R^2 represents a methyl group.

17. (Previously presented) The reaction medium according to claim 12, wherein the oil phase comprises a fatty acid methyl ester selected from the group consisting of methyl oleate, methyl palmitate, methyl stearate, methyl pelargonate and mixtures thereof.

18. (Previously presented) The reaction medium according to claim 12, wherein the oil phase comprises an oil selected from the group consisting of coconut oil, sunflower oil, rapeseed oil and mixtures thereof.

19. (Previously presented) The reaction medium according to claim 12, wherein the emulsifier comprises a combination of a hydrophilic emulsifier having an HLB value of from 8 to 18 and a hydrophobic co-emulsifier.

20. (Previously presented) The reaction medium according to claim 12, wherein the emulsifier is present in an amount of from 1 to 25% by weight based on the emulsion.

21. (Previously presented) The reaction medium according to claim 12, wherein the microemulsion comprises water in an amount of from 20 to 90% by weight based on the total weight of the emulsion.

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22. (Previously presented) The reaction medium according to claim 12, wherein the oil phase is present in an amount of from 10 to 80% by weight based on the emulsion.

23. (Currently amended) A fermentation process comprising:

(a) providing a reaction medium comprising a phase inversion temperature emulsion, wherein the emulsion comprises water, an emulsifier and an oil phase selected from the group consisting of (i) fatty acid alkyl esters, vegetable triglycerides, and mixtures thereof comprising at least one of a carbon source or a ~~transformant~~ substrate, and wherein the emulsion has an average droplet size of from 50 to 400 nm;

(b) combining the reaction medium and a microorganism; and

(c) conducting fermentation.

24. (Currently amended) The fermentation process according to claim 23, wherein the reaction medium further comprises a the substrate to be fermented comprising the oil phase of the emulsion.

25. (Currently amended) The fermentation process according to claim 23, wherein ~~an~~ the oil phase is oxidized by the microorganism.

26. (Previously presented) The fermentation process according to claim 23, wherein the emulsion has an average droplet size of from 100 to 300 nm.

27. (Previously presented) The fermentation process according to claim 23, wherein the emulsion has an average droplet size of from 180 to 300 nm.

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28. (Previously presented) The fermentation process according to claim 23, wherein the emulsion has an average droplet size of from 160 to 250 nm.

29. (Previously presented) The fermentation process according to claim 23, wherein the oil phase comprises a fatty acid methyl ester according to the general formula (I):



wherein R^1 represents a C6-22 alkyl group and R^2 represents a methyl group.

30. (Previously presented) The fermentation process according to claim 23, wherein the oil phase comprises a fatty acid methyl ester selected from the group consisting of methyl oleate, methyl palmitate, methyl stearate, methyl pelargonate and mixtures thereof.

31. (Previously presented) The fermentation process according to claim 23, wherein the oil phase comprises an oil selected from the group consisting of coconut oil, sunflower oil, rapeseed oil and mixtures thereof.

32. (Previously presented) The fermentation process according to claim 23, wherein the emulsifier comprises a combination of a hydrophilic emulsifier having an HLB value of from 8 to 18 and a hydrophobic co-emulsifier.

33. (Previously presented) The fermentation process according to claim 23, wherein the emulsifier is present in an amount of from 1 to 25% by weight based on the emulsion.

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34. (Previously presented) The fermentation process according to claim 23, wherein the water is present in an amount of from 20 to 90% by weight based on the emulsion.

35. (Previously presented) The fermentation process according to claim 23, wherein the oil phase is present in an amount of from 10 to 80% by weight based on the emulsion.